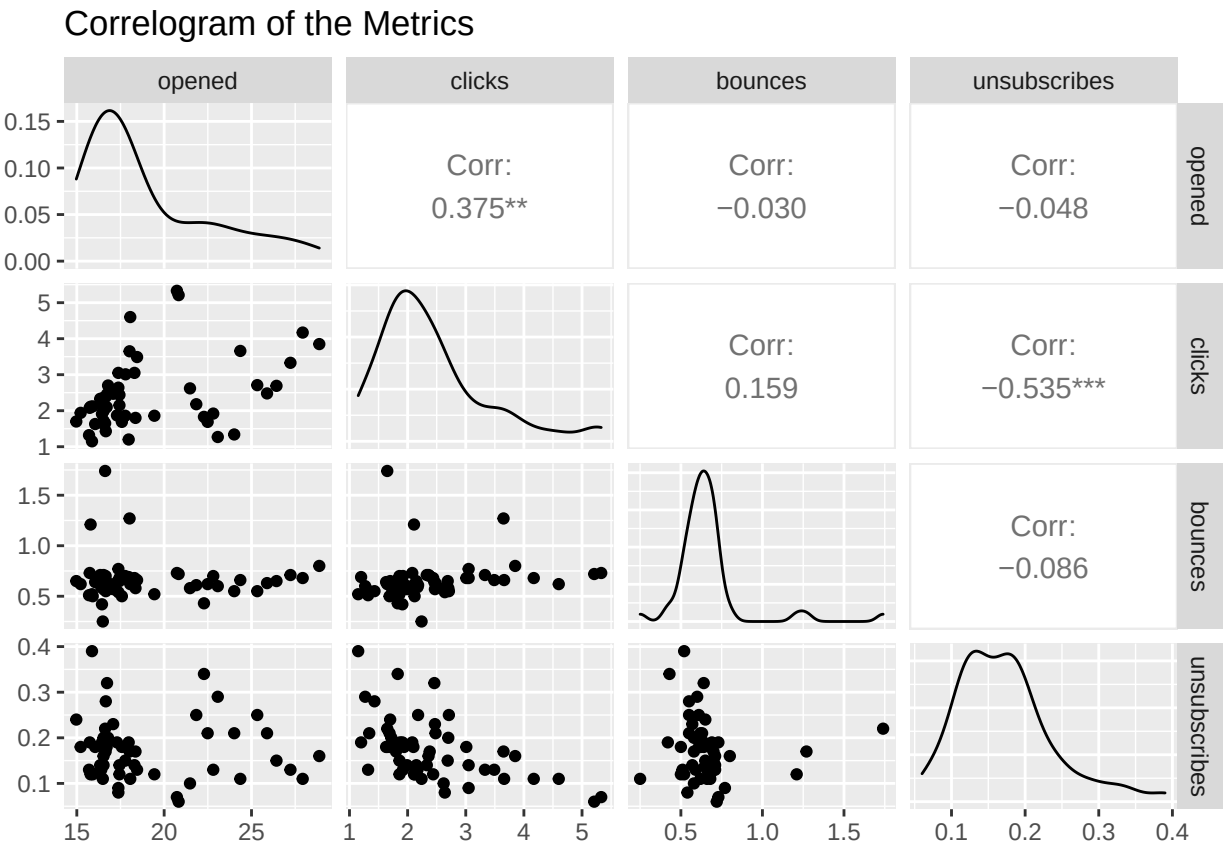
Analysis of Weekly Newsletters: Initial Report

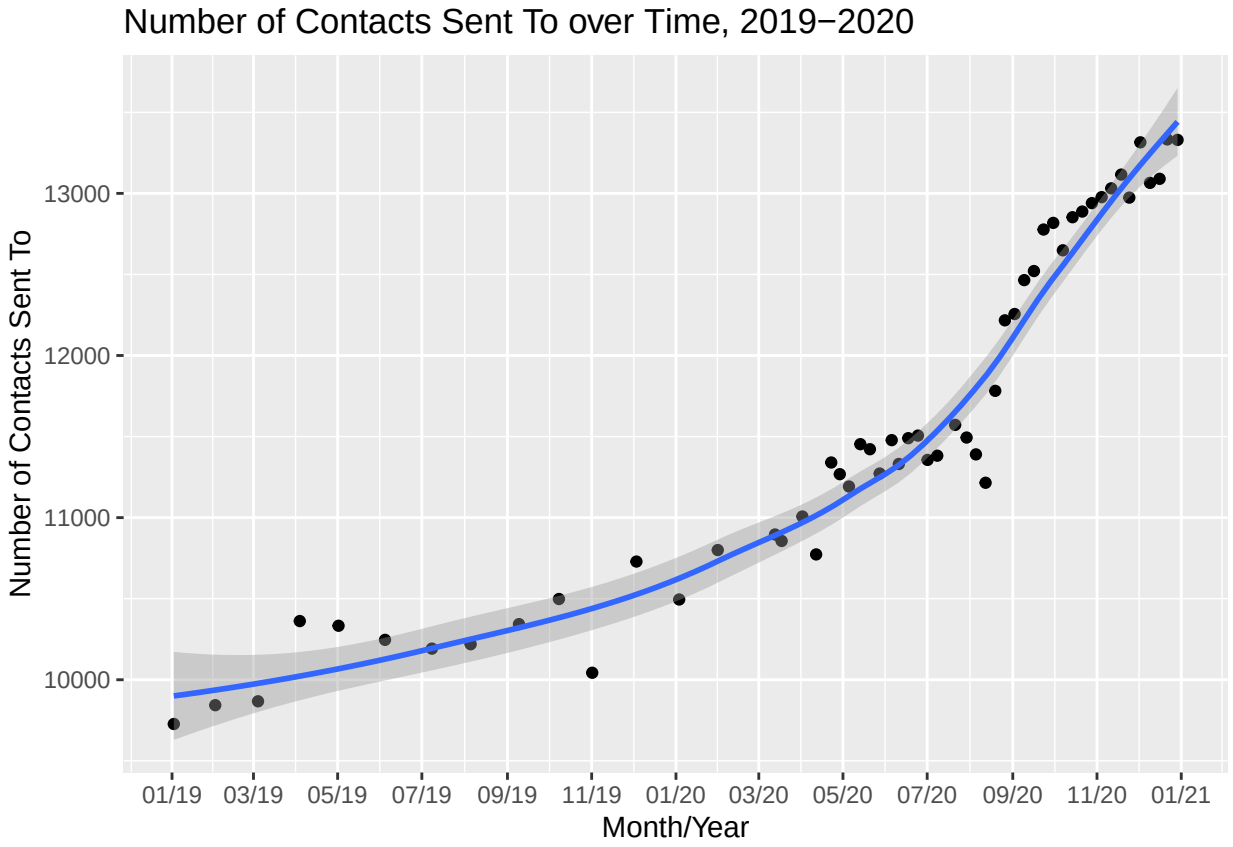
The open percentage is

$$\text{Open } \% = \frac{\text{number of contacts who opened the email}}{\text{number of contacts sent to}} \times 100\%$$

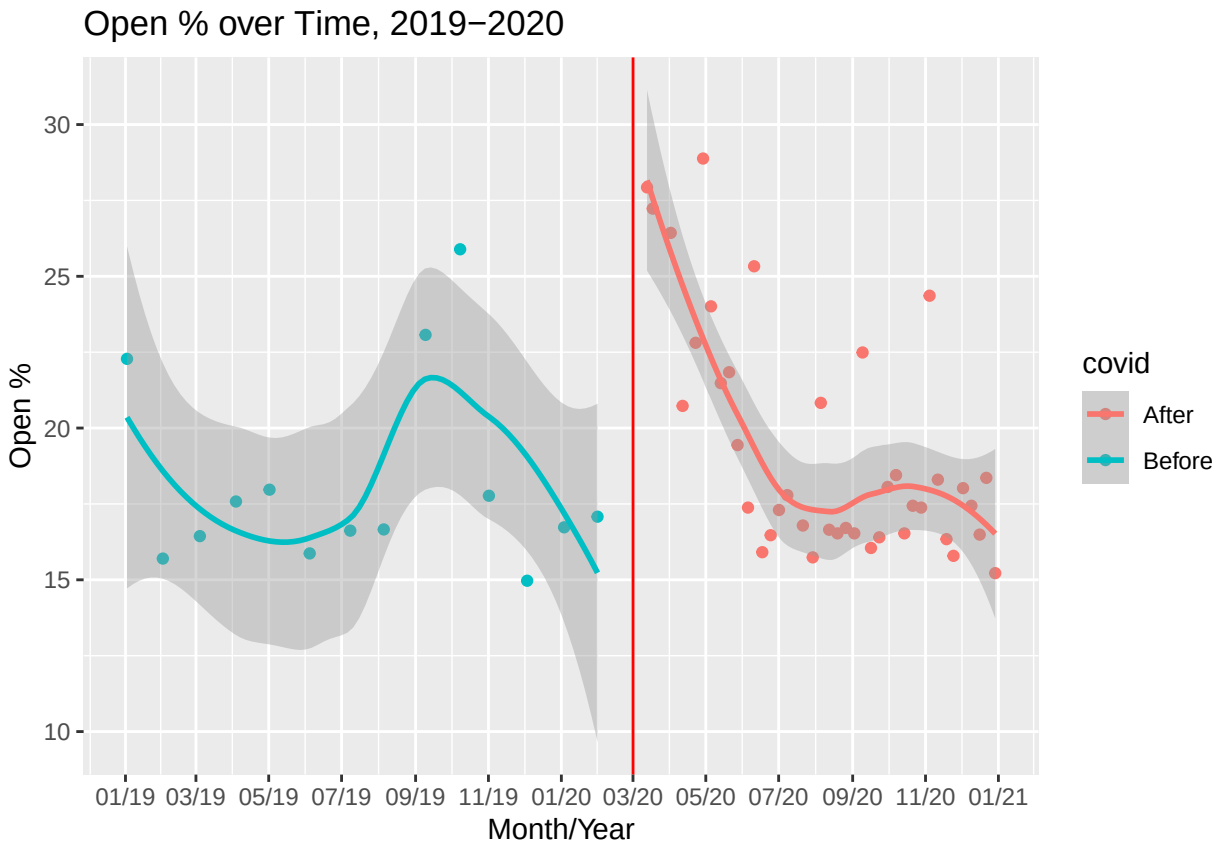
Correlation of the Metrics



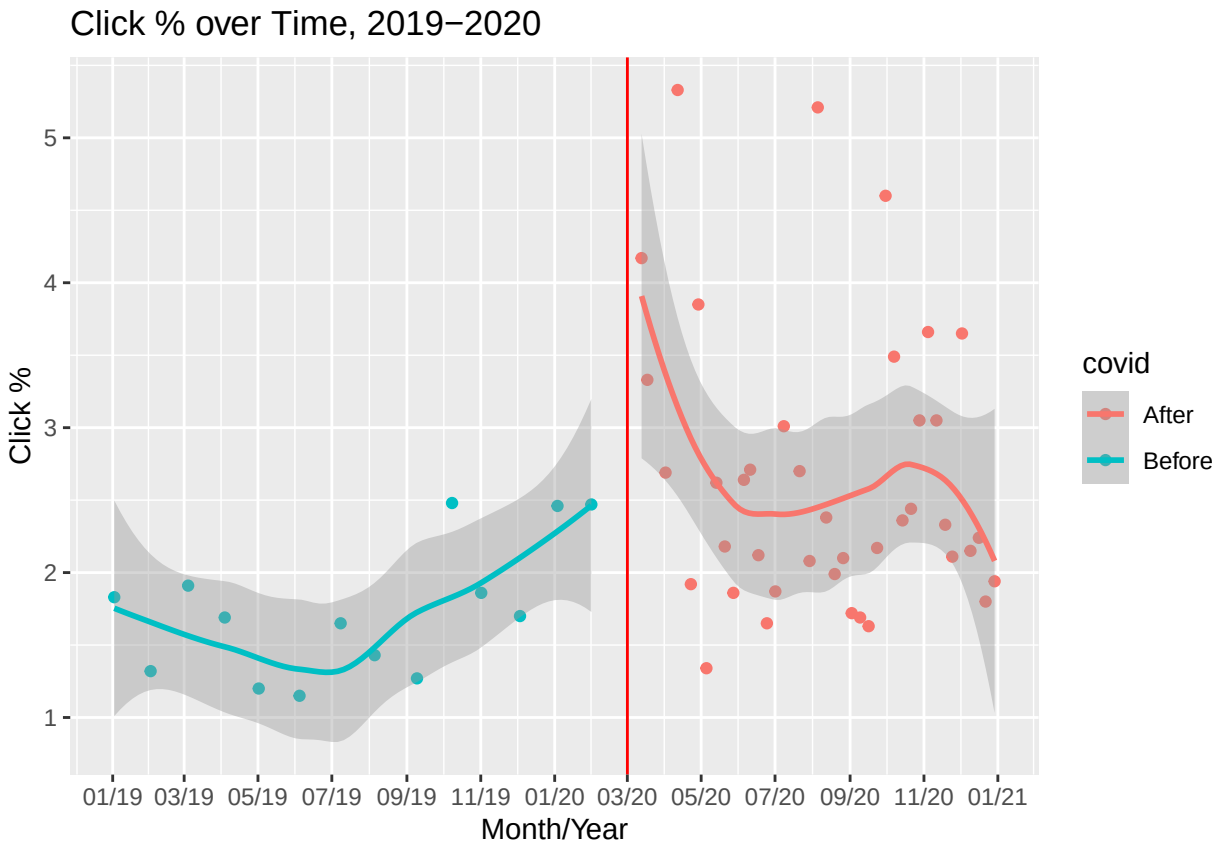
Summary Statistics over Time, 2019-2020

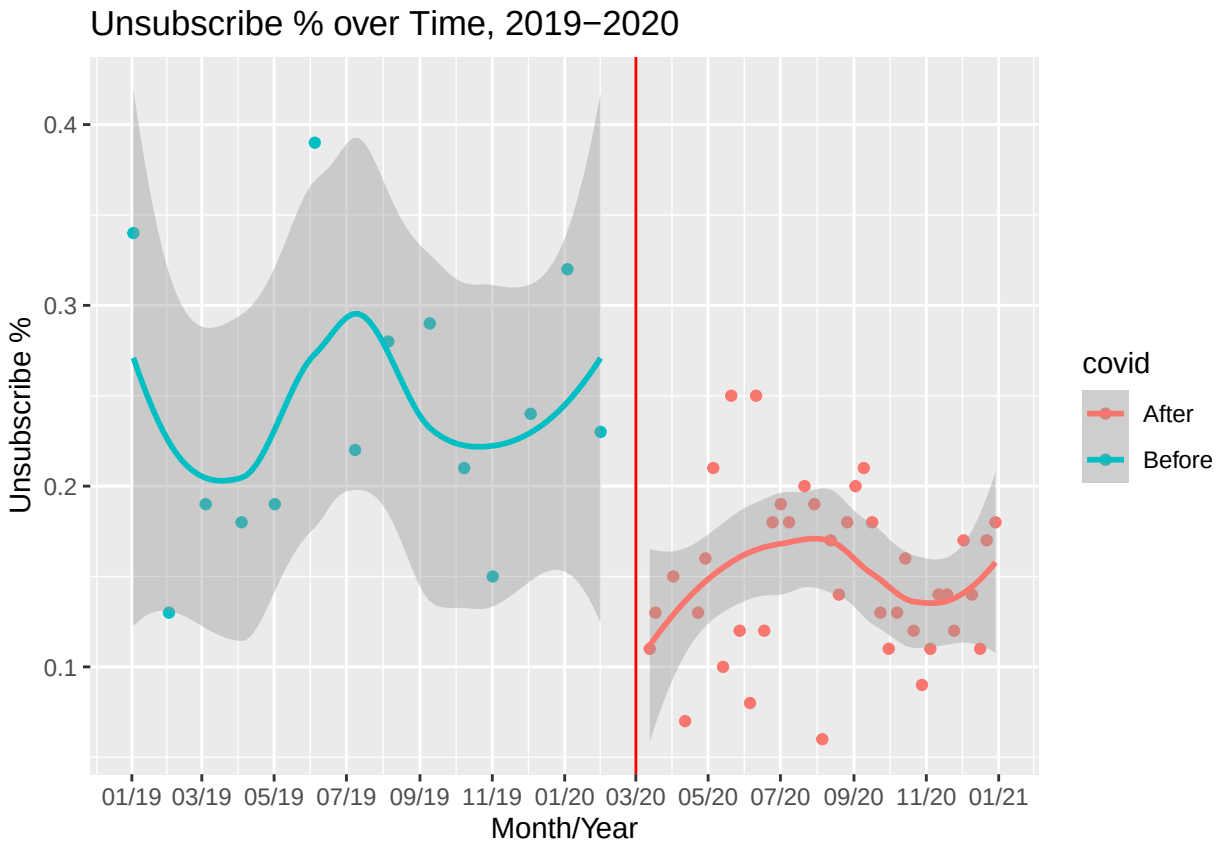


When did the pandemic start changing things? The March 12 weekly newsletter was the first one to mention the COVID-19 pandemic and remote volunteering opportunities.

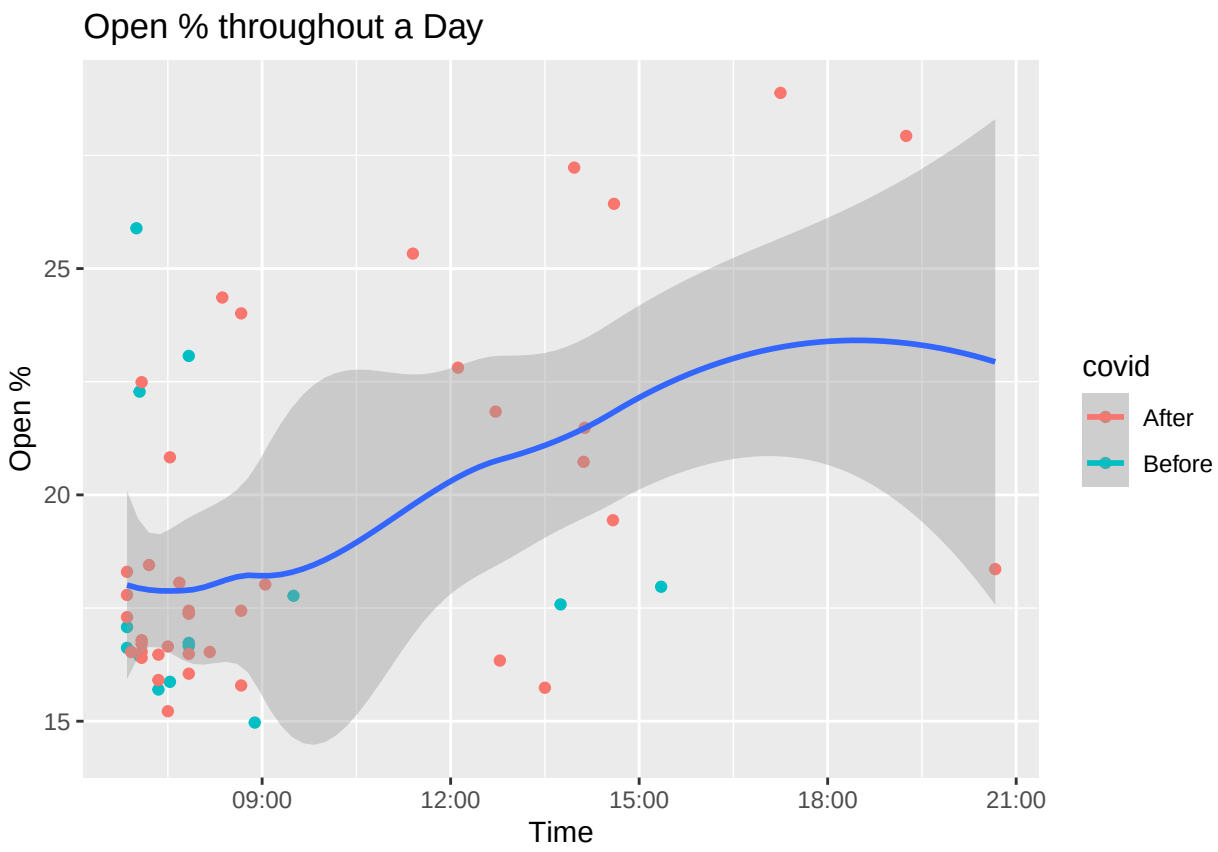


There is a spike in the open % after March.


Click % over Time, 2019−2020
Click %
5
4
3
2
1
01/19
03/19
05/19
07/19
09/19
11/19
01/20
03/20
05/20
07/20
09/20
11/20
01/21
Month/Year
covid
After
Before


Unsubscribe % over Time, 2019−2020
Unsubscribe %
0.4
0.3
0.2
0.1
01/19
03/19
05/19
07/19
09/19
11/19
01/20
03/20
05/20
07/20
09/20
11/20
01/21
Month/Year
covid
After
Before

Summary Statistics throughout a Day

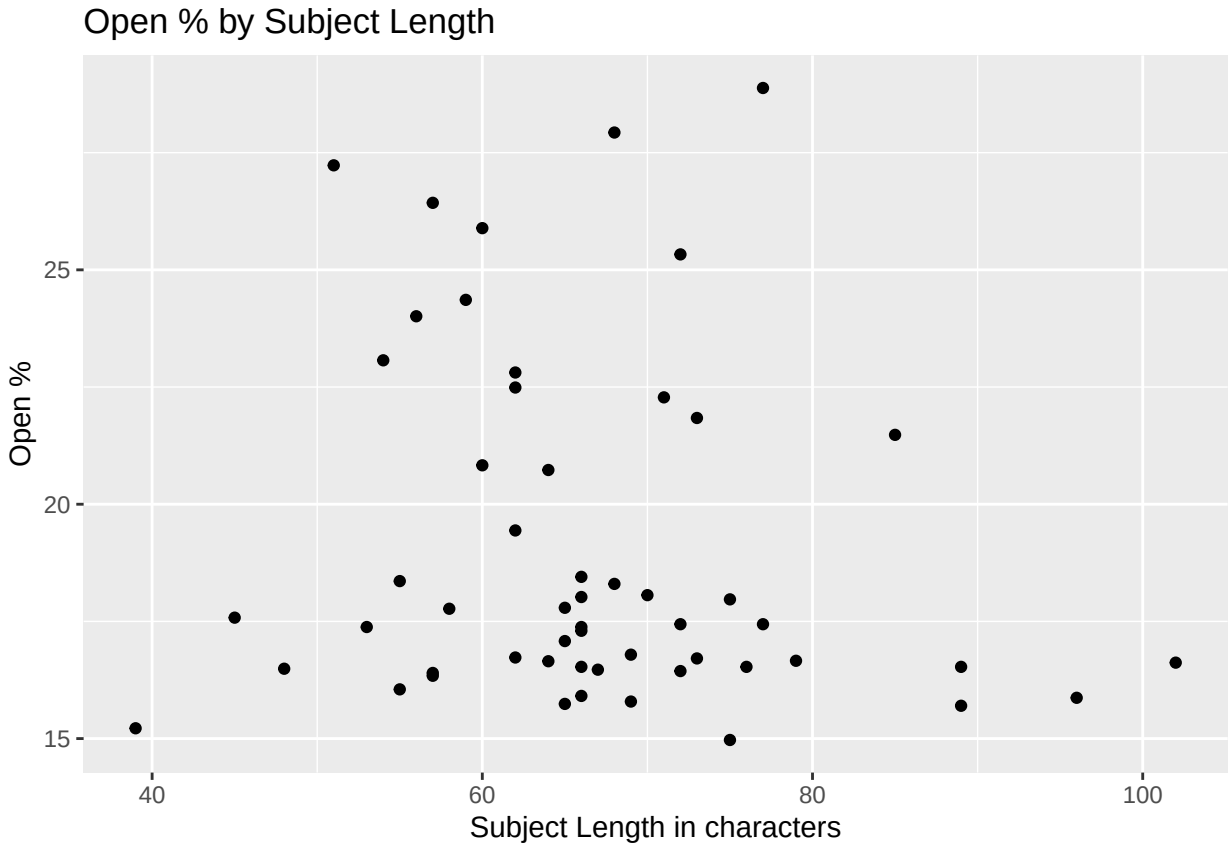


There may be a slight upward trend.

Effect of Subject Headings

Summary Statistics for number of characters within subject heading

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   39.00   59.25   66.00   66.57   72.00  102.00
```



Plotting by the number of words yields a similar plot.

Small speculation: if subject heading is too long, it may not fit in the email browser and thus lead to less opens.

Modeling

```
##
## Call:
## lm(formula = opened ~ datetime * covid + mins_since_midnight +
##     subject_length, data = weeklies1)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -4.9260 -1.7801 -0.7028  1.6476  7.6564
##
## Coefficients:
##                         Estimate Std. Error t value Pr(>|t|)
## (Intercept)           3.421e+01  1.180e+02   0.290  0.77317
## datetime             -9.561e-09  7.503e-08  -0.127  0.89913
## covidAfter            4.252e+02  1.558e+02   2.728  0.00887 **
## mins_since_midnight   4.699e-03  2.128e-03   2.209  0.03201 *
## subject_length       -4.882e-02  3.629e-02  -1.345  0.18480
## datetime:covidAfter -2.657e-07  9.867e-08  -2.693  0.00972 **
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
##
## Residual standard error: 2.913 on 48 degrees of freedom
## Multiple R-squared:  0.4311, Adjusted R-squared:  0.3718
## F-statistic: 7.274 on 5 and 48 DF,  p-value: 3.861e-05
```